

Response Under 37 CFR 1.116

Expedited Procedure

Examining Group 2615

Application No. 10/544,253

Paper Dated December 19, 2007

In Reply to USPTO Correspondence of September 21, 2007

Attorney Docket No. 0388-051646

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-9 (Cancelled).

Claim 10 (Currently Amended): A sound detecting mechanism comprising a pair of electrodes forming a capacitor on a substrate in which one of the electrodes is a back electrode forming perforations therein corresponding to acoustic holes and the other of the electrodes is a diaphragm,

wherein a multilayered assembly is mounted on the substrate, the multilayered assembly formed of the diaphragm, a sacrificial layer and the back electrode superposed in series by vapor deposition technique;

the sacrificial layer is etched relative to the multilayered assembly formed of the diaphragm, the sacrificial layer and the back electrode, thereby defining a void area between the diaphragm and the back electrode, with the sacrificial layer remaining at outer peripheral portions of the void area; and

the back electrode being formed by polycrystal silicon of $5\mu\text{m}$ to $20\mu\text{m}$ in thickness; and

the substrate comprises a single crystal silicon on insulator (SOI) structure wafer including a silicon oxide film or a silicon nitride film formed on a monocrystal silicon substrate and a polycrystal silicon film formed on the silicon oxide film or the silicon nitride film.

Claim 11 (Currently Amended): The sound detecting mechanism of claim 10, wherein the substrate comprises a support substrate having a monocrystal silicon

Response Under 37 CFR 1.116

Expedited Procedure

Examining Group 2615

Application No. 10/544,253

Paper Dated December 19, 2007

In Reply to USPTO Correspondence of September 21, 2007

Attorney Docket No. 0388-051646

substrate acting as the base thereof, and a (100) silicon substrate of ~~(100)~~ orientation is used as the monocrystal silicon substrate.

Claim 12 (Previously Presented): The sound detecting mechanism of claim 10, wherein an impurity diffusion treatment is executed on the diaphragm.

Claim 13 (Previously Presented): The sound detecting mechanism of claim 10, wherein the substrate comprises a support substrate having a monocrystal silicon substrate acting as the base thereof, and the support substrate consists of a single crystal silicon on insulator (SOI) wafer.

Claim 14 (Previously Presented): The sound detecting mechanism of claim 13, wherein the single crystal silicon on insulator (SOI) wafer has an active layer used as the diaphragm.

Claim 15 (Previously Presented): The sound detecting mechanism of claim 13, wherein the diaphragm is formed of monocrystal silicon of $0.5\mu\text{m}$ to $5\mu\text{m}$ in thickness.

Claim 16 (Cancelled).

Claim 17 (Currently Amended): The sound detecting mechanism of claim ~~[[16]]~~ 10, wherein the polycrystal silicon film formed on the single crystal silicon on insulator (SOI) structure wafer is used as the diaphragm.

Claim 18 (Currently Amended): The sound detecting mechanism of claim ~~[[16]]~~ 10, wherein the diaphragm is formed of polycrystal silicon of $0.5\mu\text{m}$ to $5\mu\text{m}$ in thickness.